

## IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application.

### Listing of Claims:

1. (currently amended): Aqueous radiation curable binders comprising non-ionically stabilized epoxy resins **ABC** which are mixtures of adducts of polyethylene glycol-modified epoxy resins **A** and epoxy resins **B** that are free from polyethylene glycol derived groups, with olefinically unsaturated acids **C**, characterized in that they comprise building blocks of epoxy resins **A** modified with polyethylene glycol made by reaction, under ring opening, of polyethylene glycol and a epoxy resin having an average of two epoxy groups per molecule, and then reacting the resin obtained with a polyhydric phenol and a glycidyl ester or a glycidyl ether of a polyhydric phenol in an advancement reaction which glycidyl ethers have a specific content of epoxide groups of between 1.1 mol/kg and 6.7 mol/kg, of epoxy resins **B** that are free from polyethylene glycol, and of olefinically unsaturated acids **C**, and that at least 50 % of all reaction products derived from the epoxy resins **A** and **B** comprise at least one ester group formed by reaction of a terminal epoxy group with an olefinically unsaturated acid **C**.
2. (currently amended): Aqueous radiation curable binders according to claim 1, characterized in that they contain unsaturated urethanes **DEF** which are reaction products prepared by reacting ~~derived from~~ polyfunctional isocyanates **D**, with a mixture of polyfunctional aliphatic alcohols **E**, and of hydroxyl group - containing olefinically unsaturated compounds **F**.

3. (original): Aqueous radiation curable binders according to claim 2, characterized in that the ratio of the mass of the epoxy resins **ABC** to the mass of the urethanes **DEF** is (90 to 30) : (10 to 70).
4. (original): Aqueous radiation curable binders according to claim 1, characterized in that they additionally comprise reaction products **G'GHI** of epoxy resins **G'** with at least two epoxide groups per molecule, and reaction products **GHI** of epoxy resins **G**, fatty acids **H** and amines **I**.
5. (original): Aqueous radiation curable binders according to claim 4, characterized in that the ratio of the mass of the epoxy resins **ABC** to the mass of reaction products **G'GHI** is (90 to 30) : (10 to 70).
6. (original): Aqueous radiation curable binders according to claim 2, characterized in that they additionally comprise reaction products **G'GHI** of epoxy resins **G'** with at least two epoxide groups per molecule, and reaction products **GHI** of epoxy resins **G**, fatty acids **H** and amines **I**.
7. (original): Aqueous radiation curable binders according to claim 6, characterized in that the ratio of the mass of the epoxy resins **ABC** to the mass of the urethanes **DEF** is (90 to 30) : (10 to 70).

8. (currently amended): A process for the preparation of aqueous radiation curable binders of claim 1, characterized in that in the first step, an hydrophilic epoxy resin A modified by polyethylene glycol is prepared by reacting ~~the hydroxy compound on which~~ in the first step, an epoxy resin having an average of two epoxy groups per molecule, and a polyethylene glycol, under ring opening, which resin is based then reacted with one of the polyhydric phenols selected from the group consisting of resorcinol, hydroquinone, 2,2-bis-(4'-hydroxyphenyl)-propane (Bisphenol A), mixtures of isomers of dihydroxydiphenyl methane (bisphenol F), 4,4'-dihydroxydiphenyl cyclohexane, 4,4'-dihydroxy-3,3'-dimethyldiphenyl propane, 4,4'-dihydroxydiphenyl, 4,4'-dihydroxybenzophenone, bis-(4'-hydroxyphenyl)-1,1-ethane, bis-(4'-hydroxyphenyl)-1,1-isobutane, bis-(4' hydroxy-tert.-butylphenyl)-2,2-propane, bis-(2-hydroxynaphthyl)-methane, 1,5-dihydroxynaphthalin, tris-(4-hydroxyphenyl)-methane, bis-(4-hydroxyphenyl) ether, bis-(4-hydroxyphenyl) sulfone and the chlorination and bromination products of the compounds mentioned here diepoxide on which the epoxy resin is based and a glycidyl ester or a glycidyl ether of a polyhydric phenol which glycidyl ethers have a specific content of epoxide groups of between 1.1 mol/kg and 6.7 mol/kg in the way of an advancement reaction, this epoxy resin is then mixed with an epoxy resin **B** which is not modified with polyethylene glycol, and in the second step this mixture is reacted with an olefinically unsaturated acid **C**, wherein in this step, ~~a mixture of adducts~~ non-ionically stabilized epoxy resins **ABC** is which are mixtures of adducts of polyethylene glycol-modified epoxy resins **A** and epoxy resins **B** that are free from polyoxyethylene groups, with olefinically unsaturated acids **C** are formed by ring opening of the epoxide rings.

9. (currently amended): A process for the preparation of aqueous radiation curable binders of claim 2, characterized in that a urethane acrylate **DEF** is synthesized by reacting from a polyfunctional isocyanate **D**, with a mixture of optionally a saturated aliphatic polyhydric hydroxy compound **E**, and an olefinically unsaturated aliphatic compound **F** with a having one hydroxyl group and at least one olefinic double bond, which urethane acrylate **DEF** is then mixed with the adduct non-ionically stabilized epoxy resins **ABC** of claim 8 which are mixtures of adducts of polyethylene glycol-modified epoxy resins **A** and epoxy resins **B** that are free from polyethylene glycol, with olefinically unsaturated acids **C**.

10. (currently amended): A process for the preparation of aqueous radiation curable binders of claim 4, characterized in that by reaction of epoxide compounds **G** with amines **I** and fatty acids **H** an intermediate product is made which is then reacted with an epoxy resin **G'** with at least two epoxy groups per molecule to form an adduct **G'GHI** which is then mixed to the adduct non-ionically stabilized epoxy resins **ABC** of claim 8 which are mixtures of adducts of polyethylene glycol-modified epoxy resins **A** and epoxy resins **B** that are free from polyethylene glycol, with olefinically unsaturated acids **C**.

11. (currently amended):

A process for the preparation of aqueous radiation curable binders of claim 6, characterized in that by reaction of epoxide compounds **G** with amines **I** and fatty acids **H** an intermediate product is made which is then reacted with an epoxy resin **G'** with at

least two epoxy groups per molecule to form an adduct **G'GHI** which is then mixed to the adduct **ABC** mixture prepared by the process of claim 9 .

12. (original): A method of use of aqueous radiation curable binders according to one of claims 1, 2, 4, or 6 in the production of corrosion protection coatings, comprising the steps of mixing of the binders with a photoinitiator, and optionally further additives, coating of the substrate with the paint by rolling, dipping, spraying, brushing, or application with a doctor blade, drying of the coating at a temperature of from 20 °C to 90 °C, and curing by irradiation with high energy radiation.

13. (original): The method of claim 12 for the production of corrosion protection coatings on metals.